

**LOW MAGNETIZATION MATERIALS FOR HIGH PERFORMANCE
MAGNETIC MEMORY DEVICES**

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Abstract of the Disclosure

Techniques for attaining high performance magnetic memory devices are provided. In one aspect, a magnetic memory device comprising one or more free magnetic layers is provided. The one or more free magnetic layers comprise a low magnetization material adapted to have a saturation magnetization of less than or equal to about 600 electromagnetic units per cubic centimeter. The device may be configured such that a ratio of mean switching field associated with an array of non-interacting magnetic memory devices and a standard deviation of the switching field is greater than or equal to about 20. The magnetic memory device may comprise a magnetic random access memory (MRAM) device. A method of producing a magnetic memory device is also provided.

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